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PATENT

In re: Meyers Confirmation No.: 7067  
Appl. No.: 09/464,039 Group Art Unit: 1636  
Filed: December 15, 1999 Examiner: Sumesh Kaushal  
For: 21612, NOVEL HUMAN DEHYDROGENASE  
[TITLE AS AMENDED 11/19/01]

**CLEAN COPY OF  
PENDING CLAIMS AS OF 6/21/02**

63. (Amended) The nucleic acid molecule of claim 87 further comprising vector nucleic acid sequences.

64. (Amended) The nucleic acid molecule of claim 87 further comprising nucleic acid sequences encoding a heterologous polypeptide.

65. (Amended) A host cell which contains the nucleic acid molecule of claim 87.

66. The host cell of claim 65 which is a mammalian host cell.

67. (Amended) A nonhuman mammalian host cell containing the nucleic acid molecule of claim 87.

77. (Amended) A method for detecting the presence of a nucleic acid molecule of claim 87 in a sample, said method comprising the steps of contacting the sample with a nucleic acid probe which selectively hybridizes to the nucleic acid molecule and determining whether the nucleic acid probe binds to the nucleic acid molecule in the sample; wherein said nucleic acid probe is selected from the group consisting of:

- a) the nucleotide sequence set forth in SEQ ID NO:8;

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- b) the nucleotide sequence of a fragment of the nucleotide sequence set forth in SEQ ID NO:8, wherein said fragment comprises at least 417 contiguous nucleotides of the nucleotide sequence set forth in SEQ ID NO:8;
- c) a nucleotide sequence having at least 70% sequence identity to the nucleotide sequence set forth in SEQ ID NO:8; and
- d) a nucleotide sequence complementary to a nucleotide sequence of a), b), or c).

78. (Amended) The method of claim 77, wherein the sample comprises mRNA molecules.

79. (Amended) A kit for use in the method of claim 77, wherein said kit comprises at least one nucleic acid probe of claim 77 and instructions for use in the method of claim 77.

87. (New) An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:

- a) the nucleotide sequence set forth in SEQ ID NO:8;
- b) the nucleotide sequence of the cDNA insert of the plasmid deposited with ATCC as Patent Deposit Number PTA-2170;
- c) a nucleotide sequence encoding the amino acid sequence set forth in SEQ ID NO:7;
- d) a nucleotide sequence encoding the amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Patent Deposit Number PTA-2170; and
- e) a nucleotide sequence complementary to a nucleotide sequence of a), b), c), or d).

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88. (New) An isolated nucleic acid molecule having a nucleotide selected from the group consisting of:

- a) a nucleotide sequence encoding a polypeptide having dehydrogenase activity, wherein said nucleotide sequence has at least 70% sequence identity with the nucleotide sequence set forth in SEQ ID NO:8; and
- b) a nucleotide sequence complementary to the nucleotide sequence of a).

89. (New) The nucleic acid molecule of claim 88, wherein said nucleotide sequence is selected from the group consisting of:

- a) a nucleotide sequence encoding a polypeptide having dehydrogenase activity, wherein said nucleotide sequence has at least 80% sequence identity with the nucleotide sequence set forth in SEQ ID NO:8; and
- b) a nucleotide sequence complementary to the nucleotide sequence of a).

90. (New) The nucleic acid molecule of claim 89, wherein said nucleotide sequence is selected from the group consisting of:

- a) a nucleotide sequence encoding a polypeptide having dehydrogenase activity, wherein said nucleotide sequence has at least 90% sequence identity with the nucleotide sequence set forth in SEQ ID NO:8; and
- b) a nucleotide sequence complementary to the nucleotide sequence of a).

91. (New) An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:

- a) a nucleotide sequence encoding a polypeptide having dehydrogenase activity, wherein the complement of said nucleotide sequence hybridizes under stringent conditions to the nucleotide sequence set forth in SEQ ID NO:8, said

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stringent conditions comprising hybridization at about 45°C, followed by at least one wash in 0.2X SSC/0.1% SDS at 65°C; and

b) a nucleotide sequence complementary to the nucleotide sequence of a).

92. (New) An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of

a) a nucleotide sequence encoding a fragment of the amino acid sequence set forth in SEQ ID NO:7, wherein said fragment has dehydrogenase activity and consists of at least 139 contiguous amino acids of SEQ ID NO:7; and

b) a nucleotide sequence encoding a fragment of the amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Patent Deposit Number PTA-2170, wherein the fragment has dehydrogenase activity and consists of at least 139 contiguous amino acids of the amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Patent Deposit Number PTA-2170; and

c) a nucleotide sequence complementary to the nucleotide sequence of a) or b).

93. (New) The nucleic acid molecule of claim 88 further comprising vector nucleic acid sequences.

94. (New) The nucleic acid molecule of claim 88 further comprising nucleic acid sequences encoding a heterologous polypeptide.

95. (New) A host cell which contains the nucleic acid molecule of claim 88.

96 (New) The host cell of claim 95, wherein said host cell is a mammalian host cell.

97. (New) A nonhuman mammalian host cell containing the nucleic acid molecule of claim 88.

98. (New) A method for detecting the presence of a nucleic acid molecule of claim 88 in a sample, said method comprising the steps of contacting the sample with a nucleic acid probe which selectively hybridizes to the nucleic acid molecule and determining whether the nucleic acid probe or primer binds to a nucleic acid molecule in the sample; wherein said nucleic acid probe is selected from the group consisting of:

- a) the nucleotide sequence set forth in SEQ ID NO:8;
- b) the nucleotide sequence of a fragment of the nucleotide sequence set forth in SEQ ID NO:8, wherein said fragment comprises at least 417 contiguous nucleotides of the nucleotide sequence set forth in SEQ ID NO:8;
- c) a nucleotide sequence having at least 70% sequence identity to the nucleotide sequence set forth in SEQ ID NO:8; and
- d) a nucleotide sequence complementary to a nucleotide sequence of a), b), or c).

99. (New) The method of claim 98, wherein the sample comprises mRNA molecules.

100. (New) A kit for use in the method of claim 98, wherein said kit comprises at least one nucleic acid probe of claim 98 and instructions for use in the method of claim 98.

101. (New) A method for producing a polypeptide, said method comprising culturing a host cell containing a nucleic acid molecule of claim 87 under conditions in which the polypeptide encoded by the nucleic acid molecule is expressed.

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102. (New) A method for producing a polypeptide, said method comprising culturing a host cell containing a nucleic acid molecule of claim 88 under conditions in which the polypeptide encoded by the nucleic acid molecule is expressed.

103. (New) A method for producing a polypeptide, said method comprising culturing a host cell containing a nucleic acid molecule of claim 90 under conditions in which the polypeptide encoded by the nucleic acid molecule is expressed.

104. (New) A method for producing a polypeptide, said method comprising culturing a host cell containing a nucleic acid molecule of claim 91 under conditions in which the polypeptide encoded by the nucleic acid molecule is expressed.